# Updates on Some EPA/OAR Initiatives
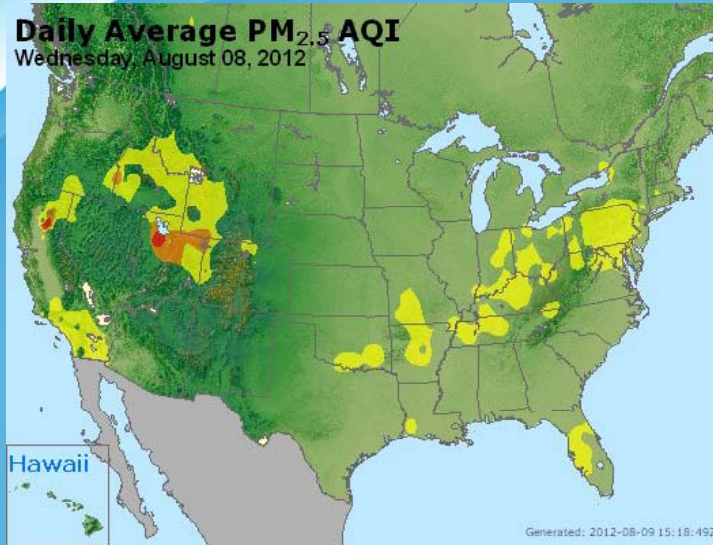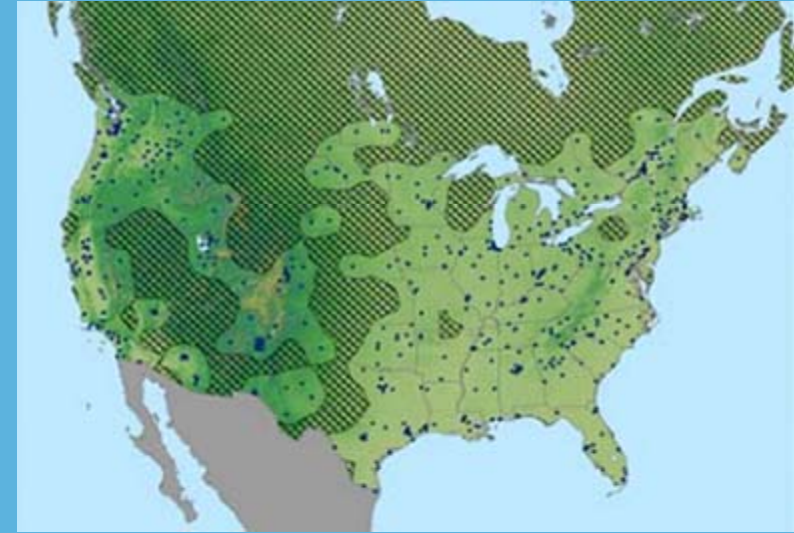
Terry J Keating, PhD
EPA Office of Air & Radiation

# AirNow Satellite Data Processor (ASDP)
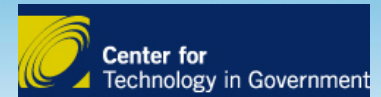


Daily Average PM₂.₅ AQI
Wednesday, August 08, 2012

Hawaii

Generated: 2012-08-09 15:18:49Z

**AirNow Operational Map
(airnow.gov)**



**Without satellite data, no contouring is possible in the hatched areas**

- **Improve operational air quality maps currently in AirNow and make them available 24 hrs a day every day**

- **Provide satellite data products in AirNow-Tech**

- **Improve tools for air quality forecasting**

Courtesy of John E. White (EPA)

# Operational ASDP Website
## aspd.airnowtech.org



Courtesy of John E. White (EPA)

# Upcoming Plans

- **AirNow Satellite Data Processor**
  - Continue to evaluate and test the results
  - Bring satellite products into AirNow-Tech (AirNow Navigator)
  - Work with NASA to gain access to a better web service with higher resolution that is more reliable and is standards compliant

- **Socioeconomic Evaluation**

- **Outreach Videos**
  - Create additional videos; topics could include case study creation and evaluation, subcommittee frequently asked questions, etc.

- **Some Investigation…**
  - Use of existing EPA approach of a downscaler to fuse satellite data with $PM_{2.5}$ surface concentrations and $PM_{2.5}$ BlueSky model predictions
  - Use of VIIRS and GASP data to replace MODIS AOD data
  - Method for selecting test sites
  - Method for defining uncertainty in the observation interpolation
  - Use of an Empirical Bayesian Kriging Interpolation method

Courtesy of John E. White (EPA)

# Joint GAW-TF HTAP Meeting
# 18-22 March, WMO, Geneva

– What is the status of the current information infrastructure to support atmospheric science (available data, tools, etc.)?

– What types of model evaluation and trend analyses are needed by TF HTAP?

– What investments are needed for the information infrastructure to support the TF HTAP analyses?

18: GAW 2013

19: GAW 2013 and Joint Poster Session

20: Joint GAW-HTAP Session

21: HTAP Session

22: HTAP Session

**www.htap.org**

# Task Force on Hemispheric Transport of Air Pollution

**LRTAP** — Long-range Transboundary Air Pollution

## WCS Accessible Repositories

| Modeling Data | Observations Data | Emissions Data |
|---|---|---|
| FZ Juelich (HTAP1) | WashU/DataFed(surf, satellite) | NOAA/CIERA |
| met.no (AeroCom, HTAP2) | NILU/EBAS (surface networks) | CNRS/ECCAD |
| JRC/ENSEMBLE (AQMEII) | NASA/GIOVANNI (satellite) | |
| BADC (ACCMIP, CCMI) | NASA/ADAM (aircraft) | |
| CAS (MICS-Asia) | CEOS-DLR/ACP (satellite) | |
| U Tokyo (ABC-Asia) | WMO/GAW (surface) | |
| EPA/RSIG (AQMEII, EPA) | SNU (ABC-Asia) | |
| | IGAS? | |
| | India AQ Resource Group? | |
| | EPA/AirNow and AirData? | |

## WCS Analysis Tools

FZ Juelich/MACC
WashU/DataFed
NOAA/CIERA
met.no/AeroCom
JRC/ENSEMBLE
EPA/RSIG

# Development of an On-line North American Informational Platform on Climate Change:
## Initial Development Phase

- Compiling and publishing a trinational database of emissions of GHGs and Black Carbon (and related emissions)
  - Development of common metadata, data structure, and data dictionaries
  - Development of access and analysis Web Services
- Project Period: February – July 2013
- Contact: Orlando Cabrera, ocabrera@cec.org

# CyAir
## Cyberinfrastructure for Air Quality Management

Search

Home   Forums   Blogs   Resources   Recommendations   Best Practices   About   Contacts

**User login**

Home » Best Practices for Interoperability for the Air Quality Community

## Best Practices for Interoperability for the Air Quality Community

Username: *

The goal of this best practices document is to describe current practices across the air quality community in interoperability, present the information associated with following these best practices in an understandable manner, and identify and encourage, as appropriate, use of the currently common and/or preferred community practices to maximize the advancement of a cyberinfrastructure for air quality management. This best practices document is intended to be used as a guidance or reference document and is a "living document," to be updated by the community over time as more information becomes available to better capture the state of the art. The effort of capturing best practices is being coordinated through collaborative community spaces such as the ESIP Air Quality Workgroup and the Group on Earth Observations (GEO) Air Quality Community of Practice (AQ CoP). Practices will change over time.

Password: *

Log in

We welcome your comments, suggestions, and other ideas related to these practices. You may submit comments in two ways:

Log in using OpenID

1) Register at ~~cyair~~ and ... via post ... mailing ... see ... or ... post here .

2) Send comments via email to comments@cyair.net.

Create new account
Request new password

**Best Practices** *(PDF)*

1. Introduction

2. Overarching Best Practices

3. Data Format Standards

4. Naming Conventions

5. Web Services

6. Metadata

7. Data Publication and Discovery

**How do we continue to identify Best Practices and facilitate their adoption?**

# Time for a Governance Structure?

**Mission Statement**

- enabling communication across air quality and atmospheric research and management communities around the globe
- facilitating the definition of metadata and data exchange standards
- aiding the implementation of interoperable data exchange systems, contributing to GEOSS

**Co-Chairs** (2-3 individuals, representation?)

**Steering Body** (designated membership?)

**Secretariat** (ESIP Secretariat? Functions?)

**Relationship** to ESIP AQWG and other groups

http://wiki.esipfed.org/index.php/GEO_AQ_CoP_Governance